



# LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING  
MEMBER  
of the  
IESNA

905 Harrison Street · Allentown, PA 18103 · 610-770-1044 · Fax 610-770-8912 · www.LuminaireTesting.com

LTL NUMBER: 18381

DATE: 05-13-2010

PREPARED FOR: LUMETTA, INC.

CATALOG NUMBER: FP1304

LUMINAIRE: FORMED WHITE ENAMEL STEEL HOUSING, FORMED SPECULAR HAMMERTONE ALUMINUM UPPER REFLECTOR, TRANSLUCENT WHITE PLASTIC DIFFUSER WITH FORMED STEEL FRAME, OPEN TOP AND BOTTOM.

LAMP: ONE VBU 26 WATT DOUBLE TUBE COMPACT FLUORESCENT LAMP RATED AT 1800 LUMENS.

LAMP CATALOG NUMBER: SYLVANIA CF26DD/E/IN/835

MOUNTING: PENDANT

ELECTRICAL VALUES: 120.0VAC, 0.1735A, 18.77W, PF=0.901

### Candela Distribution

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	
5	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	11.3
15	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	53.6
25	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	106.7
35	219	219	219	219	219	219	219	219	219	219	219	219	219	219	219	219	136.3
45	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	136.4
55	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	123.9
65	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	108.0
75	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	92.8
85	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	79.3
90	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	
95	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	73.7
105	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	70.3
115	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	63.6
125	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	54.7
135	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	45.4
145	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	36.1
155	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	24.6
165	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	10.3
175	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0.6
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

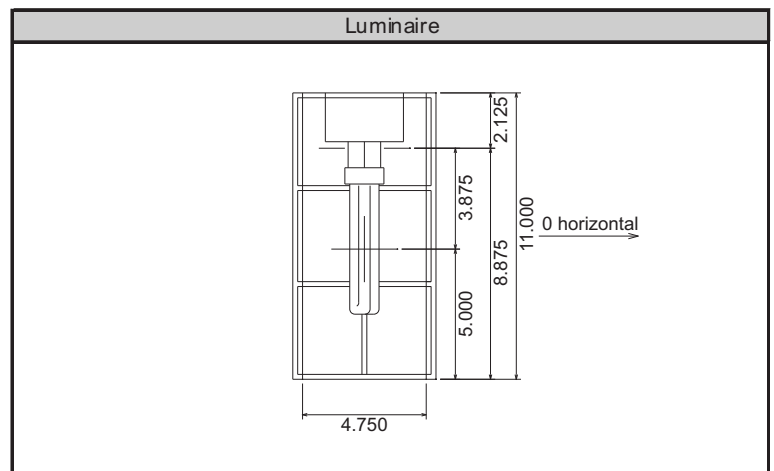
### Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	171.5	9.5%	14.0%
0-40	307.9	17.1%	25.1%
0-60	568.2	31.6%	46.3%
0-90	848.3	47.1%	69.1%
90-180	379.3	21.1%	30.9%
0-180	1227.7	68.2%	100.0%

Total luminaire efficiency: 68.2%

CIE Type: Semi-Direct

Spacing Criterion: 2.20



Approved By: MG

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IESNA PROCEDURES.



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Candela Tabulation (5 degree Vertical Increments)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
5	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
10	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144	144
15	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
20	217	217	217	217	217	217	217	217	217	217	217	217	217	217	217	217
25	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233
30	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233	233
35	219	219	219	219	219	219	219	219	219	219	219	219	219	219	219	219
40	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199
45	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177
50	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156
55	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
60	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
65	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
70	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
75	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
85	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
90	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
95	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
100	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
105	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
110	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
115	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
120	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
125	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
130	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
135	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
140	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
145	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
150	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
155	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
160	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
165	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
170	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
175	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	2.2	45-50	66.9	90-95	37.1	135-140	21.5
5-10	9.0	50-55	63.8	95-100	36.6	140-145	19.2
10-15	19.8	55-60	60.1	100-105	35.8	145-150	16.8
15-20	33.7	60-65	56.0	105-110	34.5	150-155	13.9
20-25	47.5	65-70	52.0	110-115	32.8	155-160	10.6
25-30	59.3	70-75	48.2	115-120	30.8	160-165	7.2
30-35	66.7	75-80	44.7	120-125	28.5	165-170	3.2
35-40	69.7	80-85	41.3	125-130	26.2	170-175	0.6
40-45	69.5	85-90	38.0	130-135	23.9	175-180	0.0



Coefficients of Utilization - Zonal Cavity Method												
Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	0.806	0.806	0.806	0.806	0.762	0.762	0.762	0.762	0.72	0.72	0.72	0.72
1	0.72	0.677	0.638	0.603	0.677	0.639	0.604	0.573	0.636	0.602	0.572	0.544
2	0.65	0.581	0.524	0.477	0.61	0.548	0.497	0.455	0.572	0.517	0.472	0.433
3	0.59	0.505	0.44	0.388	0.552	0.477	0.418	0.371	0.517	0.45	0.397	0.354
4	0.538	0.443	0.375	0.323	0.503	0.419	0.357	0.309	0.471	0.395	0.339	0.296
5	0.492	0.392	0.323	0.274	0.46	0.371	0.308	0.262	0.431	0.351	0.294	0.251
6	0.452	0.35	0.282	0.235	0.423	0.331	0.27	0.225	0.396	0.314	0.257	0.216
7	0.417	0.314	0.249	0.204	0.391	0.298	0.238	0.196	0.366	0.282	0.227	0.188
8	0.386	0.284	0.221	0.179	0.362	0.27	0.212	0.172	0.339	0.256	0.202	0.165
9	0.358	0.258	0.198	0.158	0.337	0.245	0.19	0.152	0.316	0.233	0.181	0.146
10	0.334	0.236	0.178	0.141	0.314	0.225	0.171	0.135	0.295	0.214	0.164	0.13

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	0.641	0.641	0.641	0.641	0.569	0.569	0.569	0.502	0.502	0.502	0.471
1	0.561	0.534	0.51	0.488	0.472	0.453	0.436	0.415	0.4	0.387	0.358
2	0.501	0.459	0.422	0.391	0.405	0.376	0.351	0.355	0.333	0.313	0.286
3	0.452	0.399	0.357	0.321	0.352	0.318	0.29	0.309	0.282	0.259	0.235
4	0.411	0.352	0.306	0.269	0.311	0.274	0.243	0.273	0.243	0.218	0.196
5	0.377	0.313	0.265	0.229	0.277	0.238	0.208	0.244	0.212	0.187	0.167
6	0.347	0.28	0.233	0.198	0.249	0.21	0.18	0.219	0.187	0.162	0.144
7	0.321	0.253	0.206	0.172	0.225	0.186	0.157	0.199	0.167	0.142	0.125
8	0.298	0.23	0.184	0.152	0.205	0.167	0.138	0.182	0.15	0.125	0.11
9	0.278	0.21	0.166	0.135	0.188	0.15	0.123	0.167	0.135	0.112	0.097
10	0.26	0.193	0.15	0.12	0.173	0.136	0.11	0.154	0.123	0.1	0.087

Average Luminance Table (cd/m<sup>2</sup>)

	0	45	90
0	6509	6509	6509
45	5187	5187	5187
55	3804	3804	3804
65	2896	2896	2896
75	2331	2331	2331
85	1988	1988	1988

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE DATA FOR OTHER BALLAST/LAMP COMBINATIONS MAY PRODUCE ERRONEOUS RESULTS. 2) ACCORDING TO IESNA PROCEDURES, THE BALLAST(S) AND LAMP(S) ARE PRESUMED TO PRODUCE 100% OF RATED OUTPUT. AN APPROPRIATE BALLAST FACTOR MUST BE APPLIED TO THE LUMEN OUTPUT RATINGS AND LUMINOUS INTENSITY VALUES GIVEN. 3) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT WHERE THE AMBIENT TEMPERATURE WAS HELD AT 25 °C ±1°C. FIELD PERFORMANCE MAY DIFFER PARTICULARLY IN REGARDS TO CHANGE IN LUMINOUS OUTPUT AS A RESULT OF DIFFERENCE IN AMBIENT TEMPERATURE AND METHOD OF MOUNTING THE LUMINAIRE.

